

Customer

Supplier

Company name
Editor
Phone number
E-mail

Fields of Application

The in-line pumps are designed for:

Water supply and boosting,
Watering, sprinkling and dew atering,
Filling and discharging of tanks,
Circulating of hot and cold w ater,
In central heating and air-conditioning installations,
Circulating in sw imming pools,
Liquid transfer applications in industry, agriculture, etc.
Pumping of clean and sea w ater in ships.



Design Specification

The INM pumps are single-stage centrifugal pumps of non-self-priming type fitted w ith standard motors and mechanical shaft seals.

The nominal flow rates of the pumps comply w ith the DIN 24 255 standards.

Pump flanges sizes according to EN 1092, PN 16. The dimensions of the suction and discharge ports are identical. Both pump flanges have pressure gage tapings.

Single entry, closed impeller is hydraulically thrust compensated and dynamically balanced.

A drain plug is fitted in the bottom of pump housing.

The motor shaft is passed into the pump shaft for coupling and no need to use any coupling for the system.

Bearings

For INM series pumps, the motor shaft and pump shaft are passed into each other. The axial and the radial loads are carried by the bearing inside the motor. There is no need to use extra bearing for the pump. For high pow ers, a coupling system is used betw een the motor shaft and pump shaft.

Technical Data

Suction Flange	: DN 40 - DN 200
Discharge Flange	: DN 40 - DN 200
Operating Pressure	: 10 bar
Operating Temperature	: -25 – 120 °C
Flow Range	: 2 – 520 m ³ /h
Head Range	: 2 - 105 m
Speed Range	: 900-3600 rpm

INM 50-125

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Operating data specification

Pumped fluid	Water		Rated flow	15	m ³ /h
Solids			Rated head	16	m
Kind			Geodetic head	0	m
Percentage of solid content	0		Available system NPSH		m
pH value			Inlet pressure (pin)	0	kPa
Temperature	20	°C	Altitude above sea level	100	m
Density	998.3	kg/m ³	Max. operating pressure	182	kPa
Kin. viscosity	1.005	mm ² /s	Max. diff. pressure	182	kPa
Vapour pressure	2.34	kPa			

Pump

Make	MAS DAF		Impeller type		
Pump type	INM 50-125		Impeller construction		
Frame size			Impeller Ø		
Design			Max.	154	mm
Self priming	<input checked="" type="checkbox"/> No		designed	112	mm
Speed	2900	rpm	Min.	112	mm
Stages	1		Flow		
Suction port			Nominal	18.8	m ³ /h
Pressure rating	PN16		Max.	27.6	m ³ /h
Nominal pipe size	DN50		Min.	0	m ³ /h
Standard	DIN		Head		
Discharge port			Nominal	15.1	m
Pressure rating	PN16		Min.	9.8	m
Nominal pipe size	DN50		Max.	18.6	m
Standard	DIN		Shut off head	18.6	m
Shaft power	1.11	kW	NPSH3	0.793	m
Shaft power P2(Q=max.)	1.46	kW	Efficiency	60.6	%

Motor

Make/Type	1.5 KW-2900 RPM / 80-C	
Specific design	IE3 / 50 Hz / Pole pairs 1	
Rated power	1.5	kW
Electric voltage	3~ 400	V
Speed	2880	rpm
Electric current	3.3	A
Frame size	80	
Degree of protection	IP 55	
Type of protection		
Explosion protection		

Coupling

Make/Type	
Series	
Spacer length	mm
Frame size	

Materials

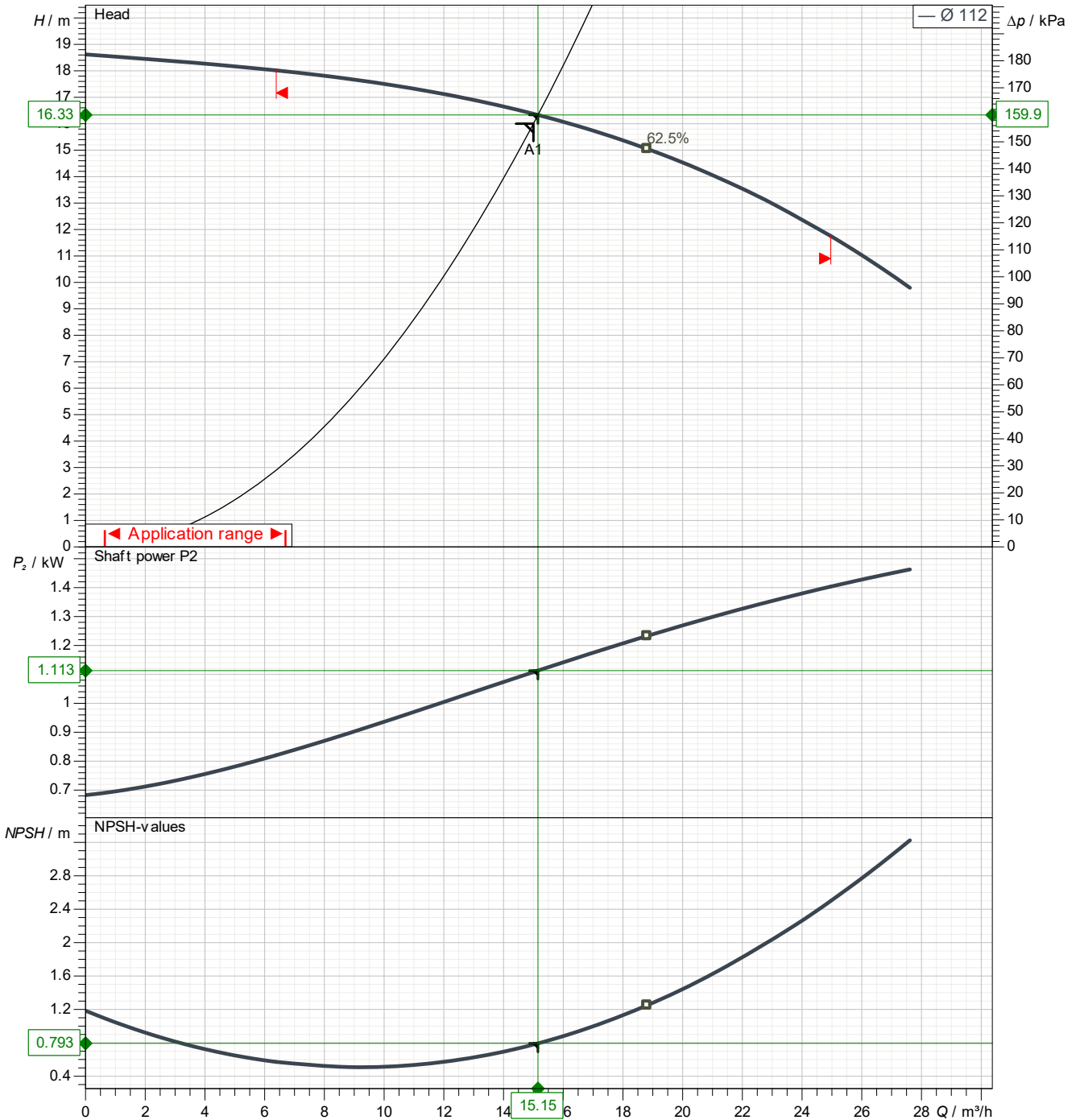
Pump		Shaft seal	AQ1EGG
Pump Casing	GJL-250 (GG25)	Material code	AQ1EGG
Impeller	NORYL	Seal face	Carbon graphite antimony impregnated (A)
Shaft	A 276 Type 420 (X20Cr13)	Seat	Silicon carbide (Q1, eSiC-Q7)
		Elastomer	EPDM (E)
		Metal parts	CrNiMo steel (G)

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Power data referred to: Water; 20°C; 998.3kg/m³; 1.005mm²/s Sense of rotation Clockwise from the drive end



Pump curves in accordance with ISO 9906 2B

Pumped fluid	Water		Rated flow	15	m ³ /h
Temperature	20	°C	Rated head	16	m
Density	998.3	kg/m ³	Shaft power	1.11	kW
Kin. viscosity	1.005	mm ² /s	Speed	2900	rpm
Vapour pressure	2.34	kPa	NPSH3	0.793	m
Impeller Ø	112	mm	Efficiency	60.6	%

Subject to change

Projec

Issue date
2025-05-12

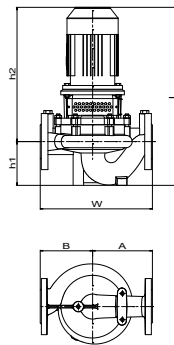
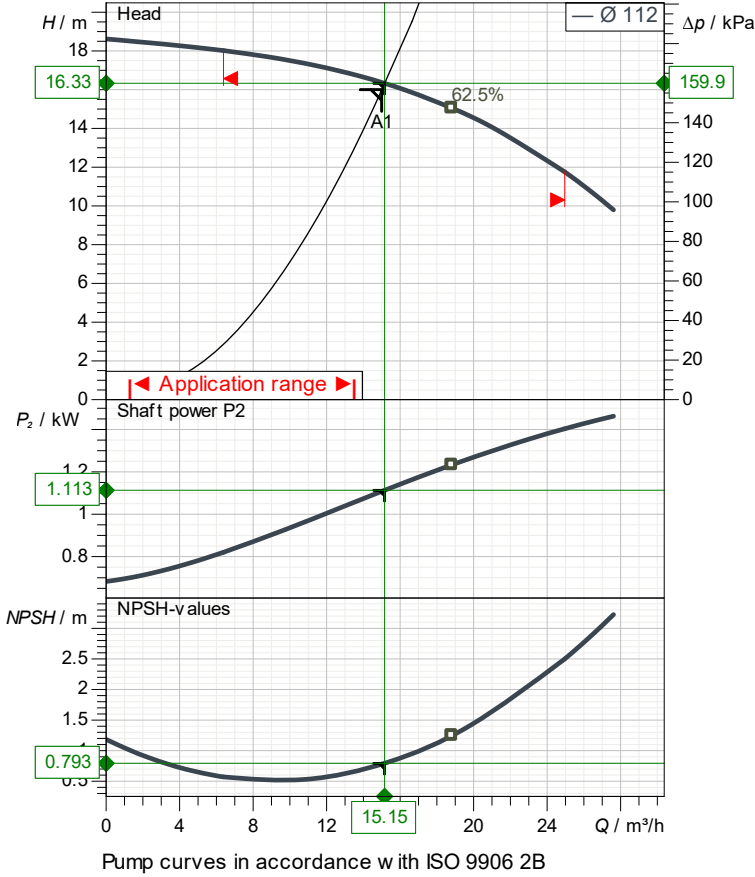
Last update
2025-05-12

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Performance curves



Dimensions

	mm
A	170
B	150
h1	110
h2	378
L	488
w	320

Pump

Make	MAS DAF
Pump type	INM 50-125
Design	
Suction port	
Pressure rating	PN16
Nominal pipe size	DN50
Standard	DIN
Discharge port	
Pressure rating	PN16
Nominal pipe size	DN50
Standard	DIN

Operating data specification

Pumped fluid	Water	
Temperature	20	°C
Density	998.3	kg/m³
Kin. viscosity	1.005	mm²/s
Vapour pressure	2.34	kPa
Rated flow	15	m³/h
Rated head	16	m
Shaft power	1.11	kW
Speed	2900	rpm
NPSH3	0.793	m
Efficiency	60.6	%
Impeller Ø	112	mm

Motor

Make/Type	1.5 KW-2900 RPM / 80-C
Specific design	IE3 / 50 Hz / Pole pairs 1
Rated power	1.5 kW
Speed	2880 rpm
Electric voltage	3~ 400 V
Electric current	3.3 A
Degree of protection	IP 55

Materials

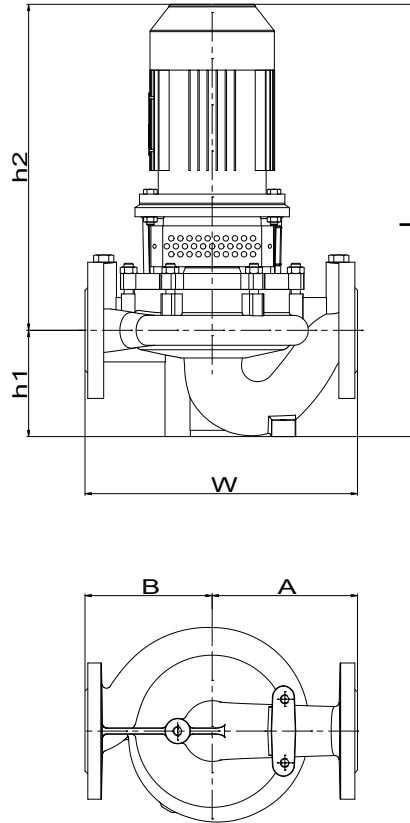
Shaft seal	AQ1EGG
Material code	AQ1EGG
Seal face	Carbon graphite antimony impregnated (A)
Seat	Silicon carbide (Q1, eSiC-Q7)
Elastomer	EPDM (E)
Metal parts	CrNiMo steel (G)

Pump Casing	GJL-250 (GG25)
Impeller	NORYL
Shaft	A 276 Type 420 (X20Cr13)

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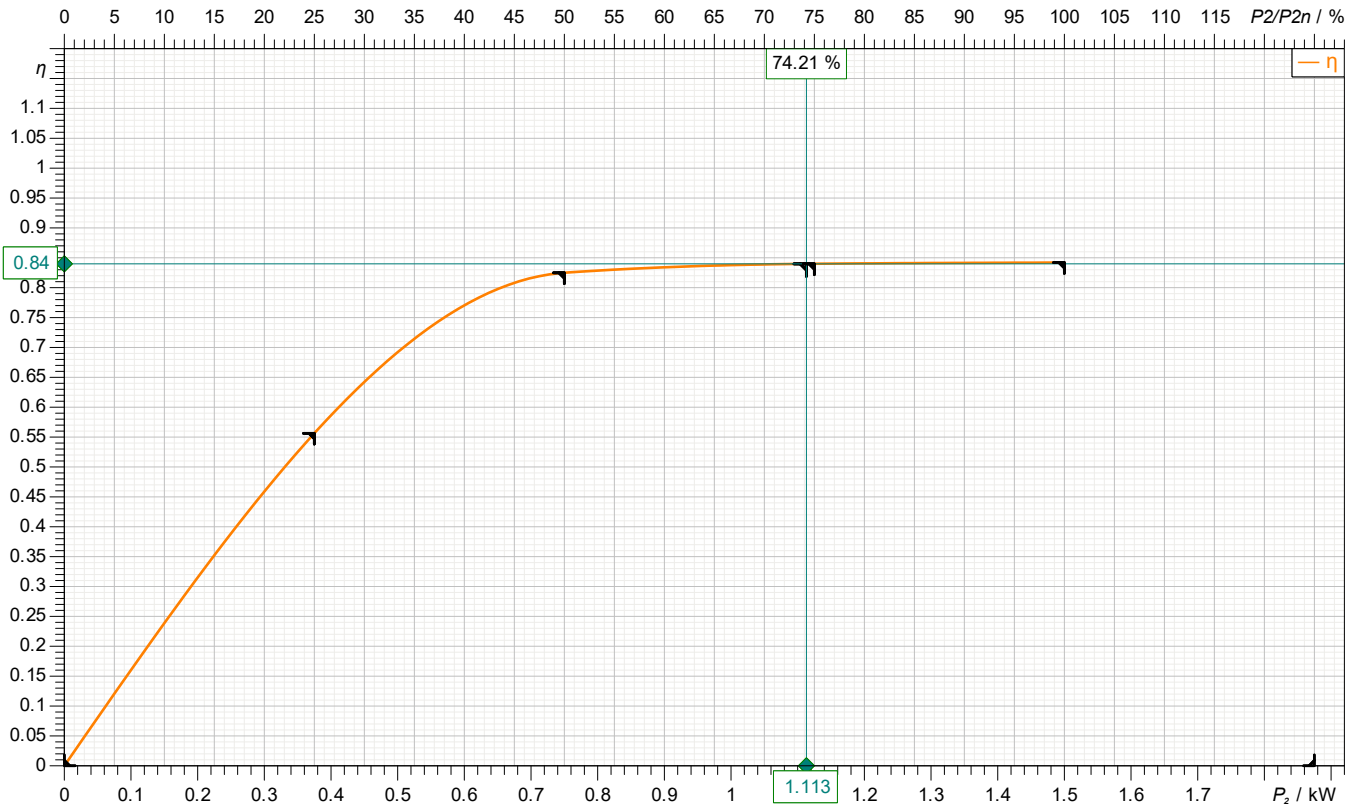
Dimensions	mm	Inlet / outlet	
A	170	Suction port	Discharge port
B	150	DN50	DN50
h1	110	PN16	PN16
h2	378		
L	488		
w	320		

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motor data



Symbol	No load	25 %	50 %	75 %	100 %	125 %
P_2 / kW	0	0.375	0.75	1.125	1.5	
P_1 / kW		0.674	0.9091	1.339	1.781	
$\eta / \%$	0	55.63	82.5	84	84.2	

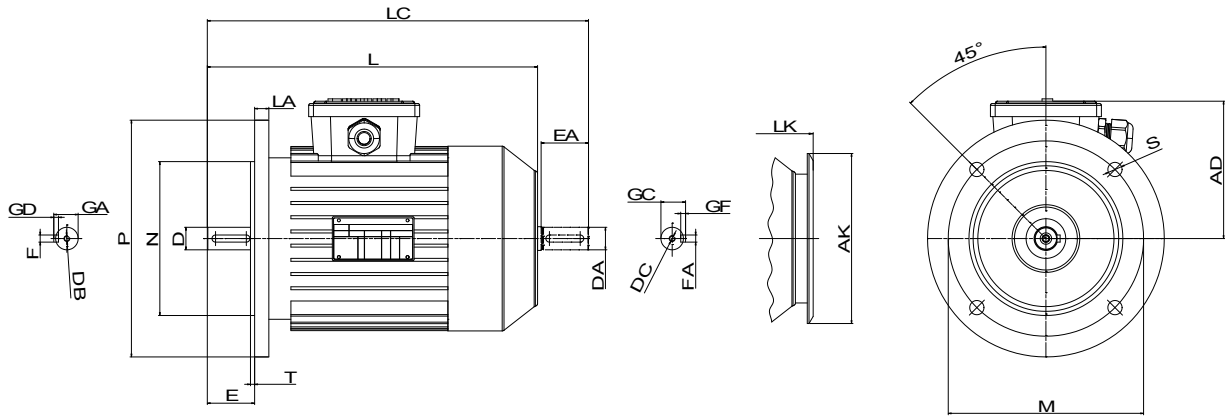
Motor

Make/Type	1.5 KW-2900 RPM / 80-C	Degree of protection	IP 55
Specific design	IE3 / 50 Hz / Pole pairs 1	Type of protection	
Rated power	1.5 kW	Explosion protection	
Electric voltage	3~ 400 V	Service factor	1.15
Number of poles	2	Starting current	
Speed	2880 rpm	Starting torque	
Electric current	3.3 A	Moment of inertia	
Power factor	0.78	No. starts per hour	
Frame size	80	Rated torque	4.97 Nm
Efficiency class	IE3	Insulation class	F (155C°)

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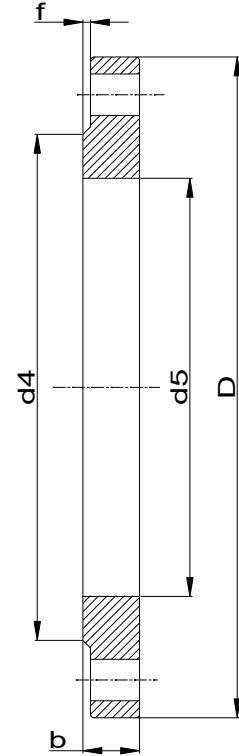
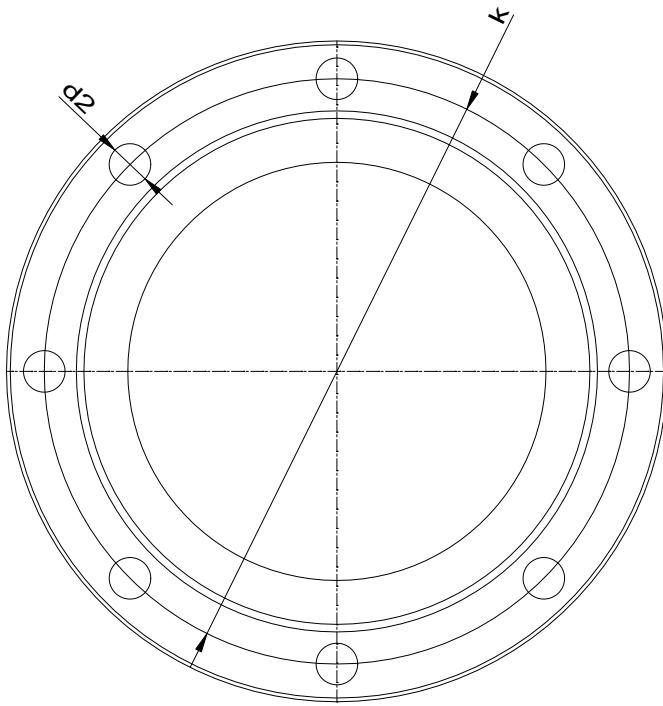


Dimensions		mm	
AD	118	LK	306
AK	151	M	165
D	14	N	130
DA	14	NO	4
DB	M6	P	200
DC	M6	S	12
E	40	T	3.5
EA	40		
FAxGF	5X5		
FxGD	5X5		
GA	16		
GC	16		
L	279		
LA	12		
LC	324		

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Suction connection

DN50
PN16

Discharge connection

DN50
PN16

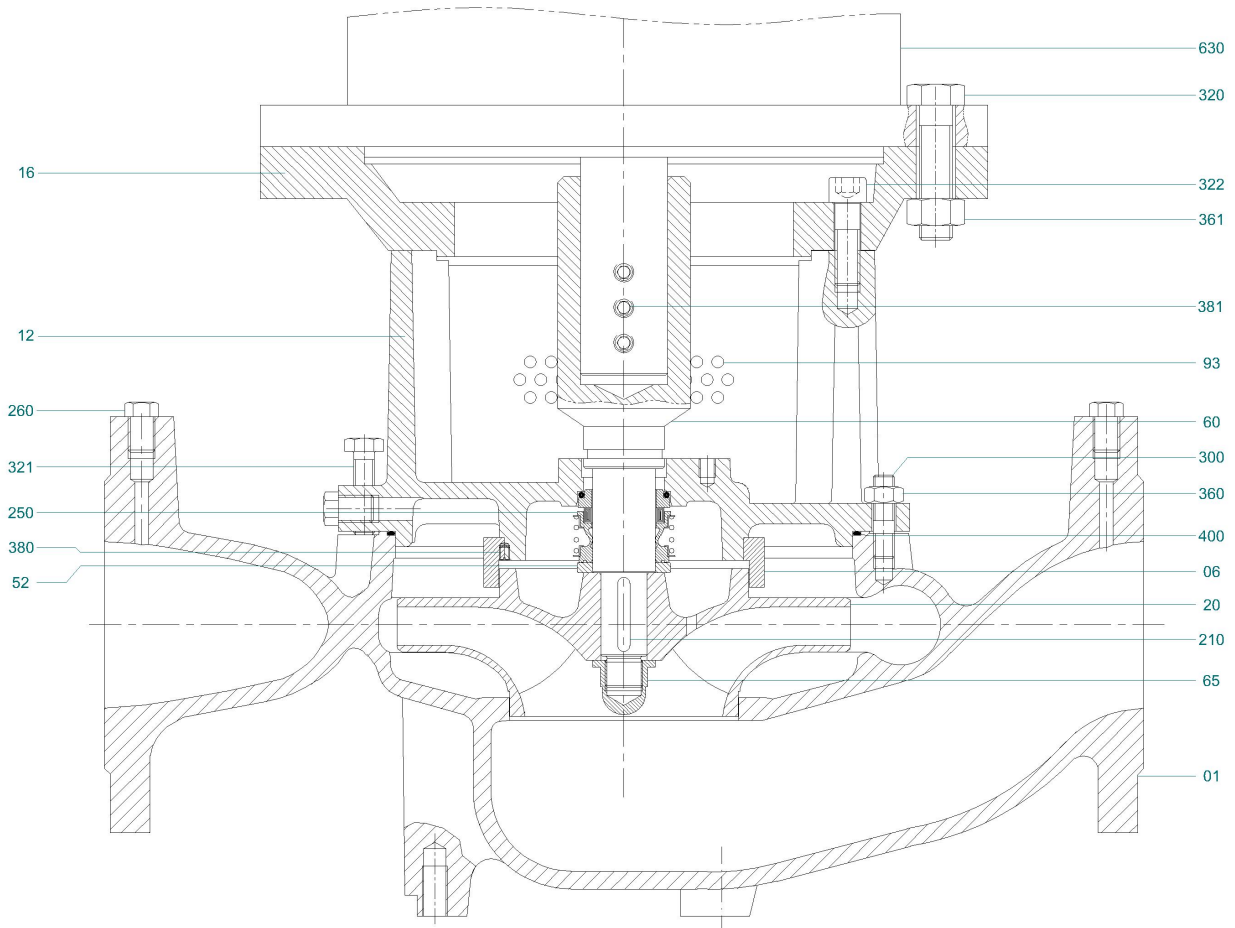
Dimensions	mm
b	19
D	165
d2	18
d4	102
d5	61.5
DN	50
f	2
k	125
n	4

Dimensions	mm
b	19
D	165
d2	18
d4	102
d5	61.5
DN	50
f	2
k	125
n	4

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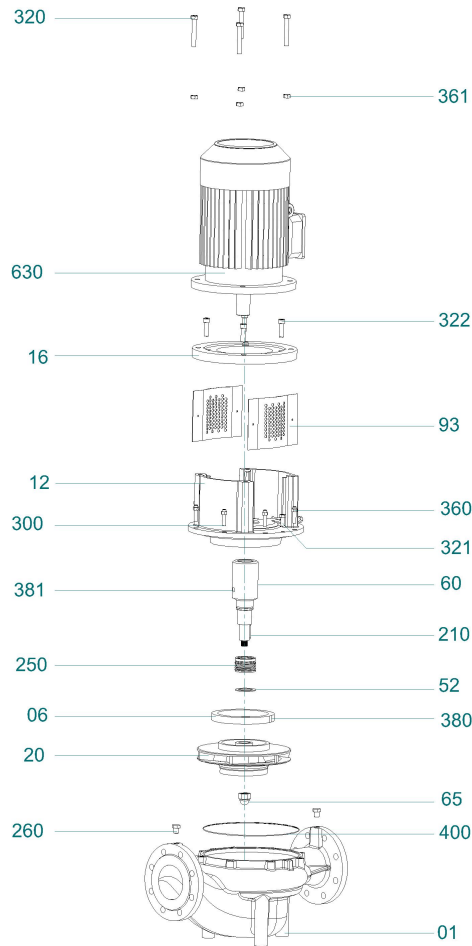


Part No	Part Name	Part No	Part Name	Part No	Part Name
01	Pump Casing	93	Protection Plate	322	Hexagonal Bolt
06	Wearing Ring	210	Key, Impeller	360	Nut
12	Adapter	250	Mechanical Seal	361	Nut
16	Motor Flange	260	Pipe Plug, Adapter	380	Set-Screw
20	Impeller	300	Stud, Pump Casing	381	Set-Screw
52	Mechanical Seal Ring	320	Hexagonal Bolt	400	O-Ring
60	Pump Shaft	321	Hexagonal Bolt	630	Electric Motor
65	Impeller Nut				

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